

Frequency of APC and RASSF1A genes promoter methylation in patients of lung cancer risky group and in healthy donors

Analyzed groups of patients	Gene	Year	exDNA in blood plasma	Cell-Surface-Bound exDNA			
				Eluted from Erythrocytes		Eluted from Leukocytes	
				PBS/EDTA	Trypsin	PBS/EDTA	Trypsin
Lung cancer risk group, N=24	APC	1999	12.51%	41.7%	37.53%	20.85%	16.68%
		2000	16.68%	37.53%	21.19%	12.51%	0
	RASSF1A	1999	16.68%	50.04%	41.7%	25.02%	16.68%
		2000	20.85%	41.7%	21.19%	20.85%	8.34%
	B 1999-2003 – lung sarcoma was found in 62.5% patients from risk group. Furthermore, all patients with high levels of promoter methylation were in that group						
Healthy donors, N=21	APC	1999	0	4.17%	0	4.17%	0
		2000	4.17%	0	0	0	0
	RASSF1A	1999	0	0	0	0	0
		2000	0	0	0	0	0

TABLE 1

Frequency of c-myc and c-erbB2 expression in patients with breast cancer (N=32)

Gene	Plasma DNA	Cell-Surface-Bound DNA	
		Erythrocytes	Leukocytes
c-myc	0	9%	9%
c-erbB2	0	9%	9%

TABLE 2

Frequency of CK19 and CEA genes expression in patients of colon cancer risky group and in healthy donors

Analyzed patients	Gene	Plasma DNA	Cell-Surface-Bound DNA	
			Erythrocytes	Leukocytes
Risky group, N=38	CK19	26.31%	60.53%	52.63%
	CEA	23.68%	57.89%	47.37%
Control group, N=20	CK19	15%	20%	15%
	CEA	20%	15%	15%

TABLE 3

Quantitative analysis of fetal and total extra-cellular DNA levels in normal pregnancies and pregnancies with pre-eclampsia

Checkpoint groups	Pregnancies with male fetus	Source of DNA	Levels of Plasma DNA (genome equivalent per ml of maternal blood)	Levels of cell surface bounded DNA (genome equivalent per ml maternal blood)	
				Erythrocytes	Leukocytes
Control (N=48)	45	Fetal	308.5* (0-1537)	462 (0-2396)	349 (0-1876)
		Total**	22342.8 (400-226453)	30352.5 (572-34269.7)	24676 (409-27887.9)
Pregnancies with pre-eclampsia (N=24)	20	Fetal	805.3 (0-3864.8)	1046.5 (0-5468.8)	887.76 (0-4567.9)
		Total	63113.3 (1224-455545.8)	97771.5 (1843.4-694989)	80976.78 (1456-60435)
Pregnancies with severe pre-eclampsia (N=8)	8	Fetal	3028.65 (347-6995.4)	4481.44 (453-9648.96)	3564 (407-7869.7)
		Total	217786 (1324-744545)	328534.5 (1934.3-1100592)	287654.8 (1675-978657.7)

* average value

** both maternal and fetal extracellular DNA

TABLE 4